PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DPW/Y3220	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/GB2004/002330	International filing date *(day/month/year)* 01.06.2004	Priority date *(day/month/year)* 30.05.2003
International Patent Classification (IPC) or national classification and IPC A61K31/44, A61P25/00		
Applicant BOOTS HEALTHCARE INTERNATIONAL LIMITED et al.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☐ *sent to the applicant and to the International Bureau)* a total of sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☒	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☒	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☒	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
30.12.2004	19.08.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Heller, D Telephone No. +49 89 2399-8746

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/GB2004/002330

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

   Description, Pages

   1-66 as originally filed

   Claims, Numbers

   1-71 as originally filed

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 1, 9-13, 17-29, 34-61, 70, 71

because:

☒ the said international application, or the said claims Nos. 1, 9-13, 17-29, 34-61, 70, 71 relate to the following subject matter which does not require an international preliminary examination (specify):

see separate sheet

☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form ☐ has not been furnished

☐ does not comply with the standard

the computer readable form ☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1-71
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-71
Industrial applicability (IA)	Yes:	Claims	2-8,14-16,30-33,62-69
	No:	Claims	1, 9-13, 17-29, 34-61, 70, 71 (see separate sheet)

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Section III:

Claims 1,9-13, 17-29, 34-61, 70, 71 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(I) PCT).

Section V:

Prior art

Reference is made to the following prior art documents:

D1 (US 6 245 785) relates to pharmaceutical compositions comprising triprolidine, and more particularly to tablets containing triprolidine hydrochloride and processes for producing and assaying such tablets (col. 1, ll. 6 to 10; examples)

D2 (US 3 146 169) relates to tablets containing medicaments and to the manufacture thereof (1, 12+13). The medicament in the medicated portion may be any desired medicament.
Examples are barbiturates such as phenobarbitone (5-ethyl-5-phenylbarbituric acid), ergotamine, dihydroergotamine, ephedrine (1 -phenyl-2-methylaminopropanol), isoephedrine (pseudoephedrine), triprolidine (1,2' .pyridyl-3-pyrrolidone-l-p-tolylprop-l-ene), etc. (2, 36)

D3 (W003/032912) is directed to compositions used for treating Central Nervous System (CNS) disorders. In addition, the invention provides convenient methods of treatment of a CNS disorder. Furthermore, the invention provides methods of treating sleep disorders using compositions that remain active for a discrete period of time to reduce side effects. More specifically, the invention is directed to the compositions and use of derivatized, e. g., ester or carboxylic acid derivatized, antihistamine antagonists for the treatment of sleep disorders (2,3-13).

D4 (http://www.netdoctor.co. uk/medicines/i 00000021. html) contains the combination of 3 substances: Triprolidine hydrochloride, Pseudoephedrine Hydrochlorid and Guaifensin.

D5 (http://www.drugs.com/alpha/t9.html) contains the combination of 4 substances: Triprolidine, Pseudoephedrine, Codeine and Guaifensin.

D6 (US 2003 0 180 352) relates to pharmaceutical delivery systems for pharmaceutical active ingredients, such as drugs, nutritionals, cosmeceuticals, and diagnostic agents. In particular, the present invention provides compositions and dosage forms including solid carriers for improved delivery of pharmaceutical active ingredients (1, §3; 3, §46).

Novelty

Present claims 1 to 71 are not novel over the prior art according to Article 33 (1) PCT.

The claims 14 to 16, 30 to 33 in their present form are not novel. What is claimed in these claims are compositions comprising specific active agents for a specific therapeutical use. As however compositions comprising active agents of the claims 14 to 16, 30 to 33 (triprolidine) are already known by the prior art, as well as their use in therapy (see D1) a composition comprising the active agents of claims 14 to 16, 30 to 33 cannot be patented for any other use of that kind.
The composition claims 14 to 16, 30 to 33 are already anticipated by the following documents as summarized above, the combination of triprolidine and other active substances is already known for the prior art, e.g. D1, D4, D5.

The medical treatment claims 1 to 71 are not novel over the following documents as summarized above:
D2 mentiones triprolidine in the group of barbiturates (col. 2, ll. 33-40). Barbiturate is the name of a group of chemical substances, but also the name of drugs for sleeping. Therefore, D2 anticipates novelty of present claims 1 to 71(2, 36; examples).
D3 includes the combination of triprolidin and other active substances (9, 27ff). D3 further explicitely states that the compounds of table 2 and 3 are used for treating sleep disorders (col. 45, ll. 30ff).

Inventive step

Even if the applicant is able to establish novelty it cannot be seen that any particular aspect of the application as filed would involve an inventive step under Article 33 (3) PCT in the light of the relevant prior art.

Industrial applicability

For the assessment of the present claims 1,9-13, 17-29, 34-61, 70, 71 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a

known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.

Section IV:

The applicant is informed that no check has been made as to whether priority has been validly claimed. Therefore, document D6 (US 2003 0 180 352), which has been disregarded in writing the present opinion, could become relevant for the assessment of novelty once the present application enters the regional phase (Rule 64 (1) b PCT).

Section VIII:

The following claims are unclear according to Article 6 PCT:

Every claim (e.g. claims 1 to 5) having the term "aid to waking refreshed after sleeping" or equivalent formulations is unclear. It is only a paraphrase for a sleeping drug. Claims 14 to 16, 30 to 33 are unclear: they are directed partially to the mere presentation of information (instructions for „which is, however, not patentable.

Claim 19 is unclear: it refers to cox II. Further "zanamir" should be "zanamivir", "valarian" should be "valerian".

Claim 20 is unclear: the terms "dcba" and "amc" are unclear. The term "without limitation" renders claim 26 unclear.

Claims 61 to 71 are unclear because they refer to the examples of the application.